

Appl. No. 10/055,501
Amendment dated December 16, 2004
Reply to Final Rejection of December 1, 2004

Amendments to the Claims

The following Listing of Claims replaces all prior versions of claims in the application.

Listing of Claims

Claims 1-5 (cancelled)

Claim 6 (previously presented) A method of making an open-celled foamed porous membrane wherein said membrane has a proportion of open cells of at least 80%, a void fraction of at least 75%, an open-pore pore size distribution with a standard deviation of $\pm 10\%$ of the average pore diameter, comprising delivering a polymer melt comprising at least one thermoplastic polymer selected from the group consisting of substituted and unsubstituted cellulose derivatives, polyolefins, polyesters, polysulfones, polyethersulfones and polyamides in a form selected from amorphous and partially crystalline at an initial processing temperature greater than the glass transition temperature of said at least one thermoplastic polymer through an extruder under superatmospheric pressure, charging said polymer melt with a cell former in an injection stage, feeding said polymer melt to a post-injection second mixing stage by a first melt pump for cooling the temperature and/or elevating the pressure of said polymer melt, and forcing said polymer melt through a die by said first melt pump to form said membrane, wherein said cell former is charged in response to the pressure drop occurring upon passage of said polymer melt through said die, wherein said polymer melt is charged in the absence of a nucleating agent with a cell former comprising at least two fluids selected from gases and liquids and a mixture of a gas and a liquid having different diffusion rates, and wherein a second melt

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pump in said second mixing stage is used to form a single-phase melt and to force said polymer melt through said die.

Claim 7 (previously presented) The method of claim 6 wherein said polymer melt is lowered to a temperature at least 50°C below said initial processing temperature.

Claim 8 (previously presented) The method of claim 6 wherein the pressure of said polymer melt in said post-injection second mixing stage is elevated to greater than 150 bar.

Claim 9 (previously presented) The method of claim 6 wherein said polymer melt is charged with a liquid cell-forming fluid.

Claim 10 (previously presented) The method of claim 6 wherein said cell former comprises carbon dioxide and water.

Claims 11-17 (cancelled)

Claim 18 (currently amended) The foamed porous membrane product of the method of claim 6 wherein said membrane has ~~a proportion of open cells of at least 80%, a void fraction of at least 75%, an open pore size distribution with a standard deviation of ± 10% of the average pore diameter and pores with~~ an average pore diameter in the microfiltration range of from 0.05 to 30 microns.

Claim 19 (currently amended) The foamed porous membrane product of the method of claim 6 wherein said membrane has ~~a proportion of open cells of at least 80%, a void fraction of at least 75%, an open pore size distribution with a standard deviation of ± 10% of the average pore diameter and pores with~~ an average pore diameter in the macrofiltration range of from greater than 30 to 200 microns.